SERVICE MANUAL

E485C EVO / E505C EVO Tier III

Crawler Excavator

Part number 48044251
English
September 2016

NEW HOLLAND CONSTRUCTION

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Items to prepare:

- Wrench [**19 mm**, **30 mm**, **36 mm**]
- Hexagon wrench (**8 mm**)
- Crowbar
- Wire rope (with the required lifting capacity)
- Lifting equipment (with the required lifting capacity)
- Nylon sling
- Marking pen
- Cap
- Plug
- Hammer
- Striking rod
- Grease
- Rag
- Cleaning fluid
- Crosstie
- Wires

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Wiring harnesses - Electrical schematic sheet 20 - Option circuit solenoid type

Type	Components	Connectors / link	Description
Valve	Y9		Option 2 speed solenoid valve (blue tape)
Valve	Y23		Option 1 knob (R)-R Solenoid valve (blue tape)
Valve	Y24		Option 1 knob (R)-R Solenoid valve (red tape)
Valve	Y25		Option 2 knob (L)-R Solenoid valve (blue tape)
Valve	Y26		Option 2 knob (L)-L Solenoid valve (red tape)
Valve	Y27		Option select solenoid valve (red tape)
Connector	CN.57-1A	**CN.57-1A**	Option select solenoid valve (red tape)
Connector	CN.57-2A	**CN.57-2A**	Option 2 speed solenoid valve (blue tape)
Connector	CN.57-5	**CN.57-5**	Option 1 knob (R)-R Solenoid valve (blue tape)
Connector	CN.57-6	**CN.57-6**	Option 1 knob (R)-R Solenoid valve (red tape)
Connector	CN.57-7	**CN.57-7**	Option 2 knob (L)-R Solenoid valve (blue tape)
Connector	CN.57-8	**CN.57-8**	Option 2 knob (L)-L Solenoid valve (red tape)
Connector	CN.57-9	**CN.57-9**	
Connector	CN.57-10	**CN.57-10**	
Connector	CN.57-11	**CN.57-11**	
Connector	CN.57-12	**CN.57-12**	

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P0087-Fuel rail pressure limiter open

Control Module : ECM

Solution:

1. Check and diagnose the below fault codes before you proceed with the diagnostics code P0087.

   Diagnostic Trouble Code P0089
   Diagnostic Trouble Code P0091
   Diagnostic Trouble Code P0092
   Diagnostic Trouble Code P0192
   Diagnostic Trouble Code P0193
   Diagnostic Trouble Code P0201
   Diagnostic Trouble Code P0202
   Diagnostic Trouble Code P0203
   Diagnostic Trouble Code P0204
   Diagnostic Trouble Code P0205
   Diagnostic Trouble Code P0206

2. Start the engine.

   While checking the Diagnostic Trouble Code with the trouble diagnosis scan tool, raise the engine speed.

   Check to see if the Diagnostic Trouble Code P0087 is detected.

   A. If Diagnostic Trouble Code P0087 has not been detected, replace the fuel filter element (Refer to " **Fuel filters - Remove - Fuel filter element (10.206)**" and " **Fuel filters - Install - Fuel filter element (10.206)**"). An intermittent problem due to foreign matter in the fuel is suspected.

   B. If the fault code is not cleared, proceed to Step **3**.

3. Turn OFF the key switch.

   Wait for **2 min** until the fuel pressure is released from the common rail.

   Turn ON the key switch.

   Check the fuel rail pressure sensor display with the trouble diagnosis scan tool.

   If the fuel rail pressure sensor display is outside the voltage **0.9 - 1 V**, inspect the fuel pressure sensor harness connector **CN.E6** for poor connection.

   A. If a problem is found, repair the harness connector **CN.E6**.

   B. If there are no problems, proceed to Step **4**.

4. Inspect the ECM harness connector **CN.D1-2** for poor connection.

   A. If a problem is found, repair the harness connector **CN.D1-2**.

   B. If there are no problems, proceed to Step **5**.

5. Inspect each circuit for high resistance.

   A. If a problem is found, repair the circuit.

   B. If the harness connector **CN.E6** and each circuit are normal, replace the fuel pressure sensor. (Refer to " **Common rail pressure sensor - Remove (55.010)**" and " **Common rail pressure sensor - Install (55.010)**")

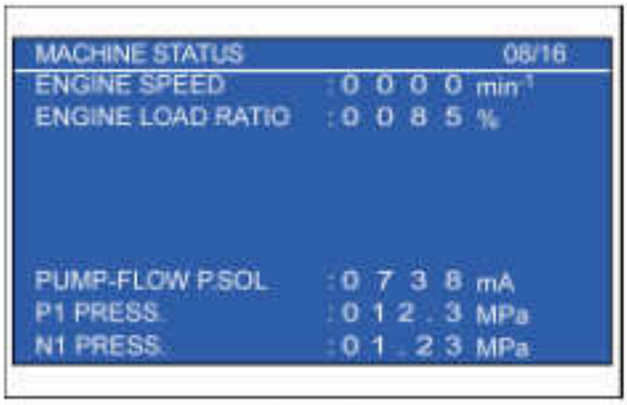
   C. If there are no problems, proceed to Step **6**.

6. If the fuel rail pressure sensor display is within the voltage **0.9 - 1 V**, start the engine.

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8. Engine

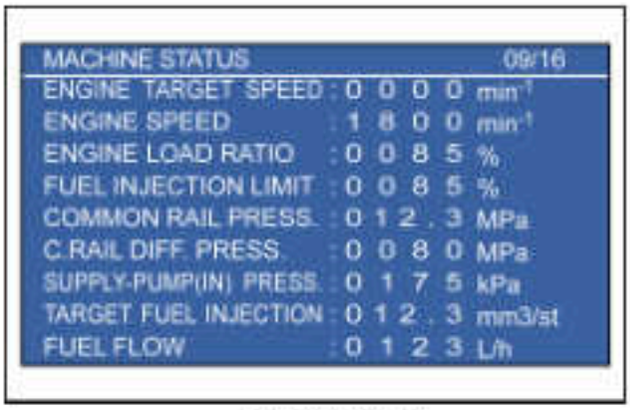
ENGINE SPEED	min^{-1} (rpm)	Engine speed
ENGINE LOAD RATIO	%	Engine load ratio
PUMP-FLOW P.SOL.	mA	Actual milli-amp for flow proportional valve
P1 PRESS.	MPa (psi)	P1 pressure
N1 PRESS.	MPa (psi)	N1 pressure



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9. Engine

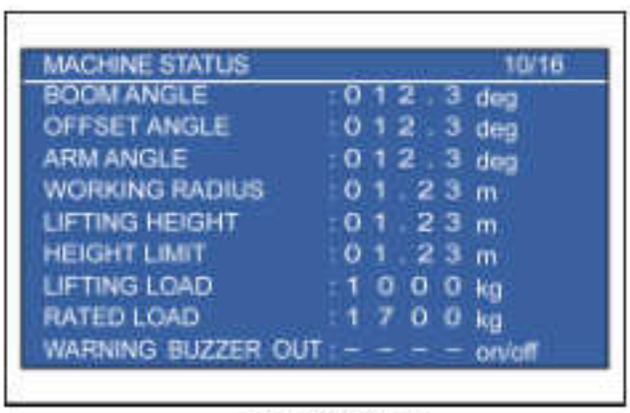
ENGINE TARGET SPEED	min^{-1} (rpm)	Engine target speed
ENGINE SPEED	min^{-1} (rpm)	Engine speed
ENGINE LOAD RATIO	%	Engine load ratio
FUEL INJECTION LIMIT	%	Fuel injection quantity limit level
COMMON RAIL PRESS.	MPa (psi)	Common rail pressure
C. RAIL DIFF. PRESS.	MPa (psi)	Common rail differential pressure
SUPPLY-PUMP (IN) PRESS.	kPa (psi)	Supply pump inlet pressure
TARGET FUEL INJECTION	mm^3 /st	Target fuel injection quantity
FUEL FLOW	L/h	Fuel flow



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10. Work radius and height

BOOM ANGLE	deg	Boom angle
OFFSET ANGLE	deg	Offset angle
ARM ANGLE	deg	Arm angle
WORKING RADIUS	m (ft.)	Work radius
LIFTING HEIGHT	m (ft.)	Hanging work height
HEIGHT LIMIT	m (ft.)	Hanging height limit
LIFTING LOAD	kg (lb)	Actual load
RATED LOAD	kg (lb)	Rated load
WARNING BUZZER OUT	on/off	Warning buzzer output



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Anti-theft system - Dynamic description

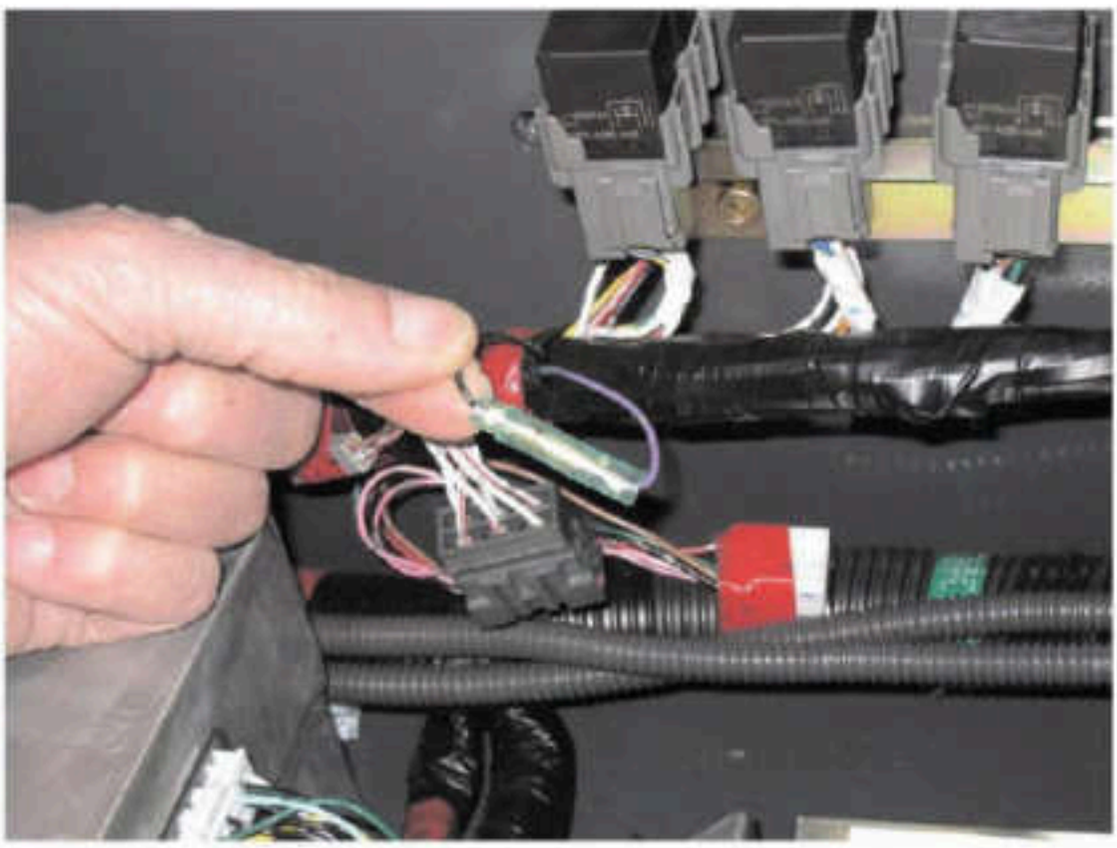
Enabling the anti-theft function

With the key "OFF", connect the anti-theft knob terminal.

When the male and female knob terminals are connected on the cab main harness in the rear cover, the anti-theft function is enabled.

The factory setting is for these knob terminals to be disconnected.

Anti-theft setting knob Connect VG (purple / green) and BG (black / green)



LPPH12CR01022PA 1

Password

Purpose

Locks the machine if is operated without authorization. (Anti-theft)

Operation explanation

1. When the anti-theft function is "ON", turn the key "ON".
2. Enter the correct password at the password input screen.

   * If an incorrect password is input, "ERROR" is displayed and the buzzer buzzes.

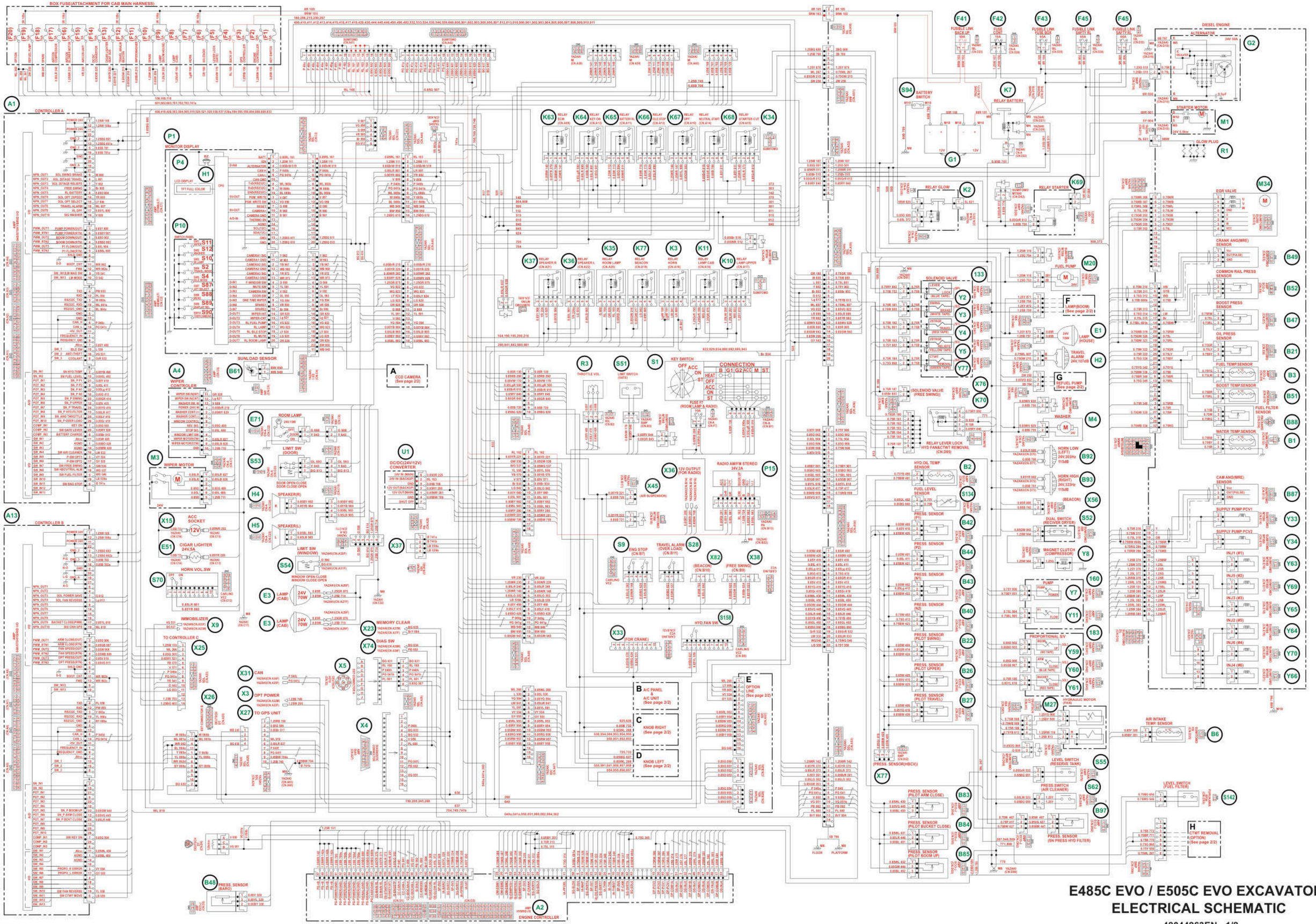
   If the correct password is then input, the lock is released.
3. The machine lock is released and the normal screen is displayed.

   * If the "ERROR" message is ignored and the engine is started, the machine will lock.

   Machine lock conditions

   - The engine speed is fixed at low idle.

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